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Training management cycle
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Abstract

Title

SIGMA RAIL, A EURO-MEDITERRANEAN PROJECT ON RAILWAY INFRASTRUCTURE MAINTENANCE TRAINING

List the key lessons or learning point that delegates will take away from the conference

The SIGMA_RAIL Euro-Mediterranean project is co-funded by the ERASMUS+ Program of the European Union. The most important results and lessons that will be highlighted in the conference are :

- ▶ Modernization of higher education systems
- ▶ The e-learning courses in railway infrastructure maintenance designed
- ▶ A demonstration of the Serious game
- ▶ Collaboration between the university and the railway operators as a good way to meet the needs of training and specially the operator's expectations

Abstract (no more than 500 words)

The SIGMA_RAIL Euro-Mediterranean project is co-funded by the ERASMUS+ Program of the European Union (Key Action 2 - Capacity-building in the Field of Higher Education). Such a structural project aims to promote reforms in higher education systems and strengthen relations between higher education systems and the wider economic and social environment. SIGMA_RAIL's goal is to propose e-learning training on railway infrastructure maintenance dedicated, not only to engineering and master programs of initial training, but also to continuing vocational education.

The Consortium is composed of academies from Europe and the Maghreb, with complementary competences regarding the project's goal.
From Europe: Université Polytechnique Hauts-de-France (UPHF, ex-UVHC), École des Ponts ParisTech, Politecnico di Milano, and the Universidade NOVA de Lisboa.
From the Maghreb: The Tunisia's Ministry of higher education and scientific research, Université de Tunis El Manar, and Université de la Manouba; the Morocco's Ministry of national education, vocational training, higher education, and scientific research, École Nationale Supérieure des Mines de Rabat, and Université Mohammed V de Rabat.
Three other institutions are associated members of SIGMA_RAIL: the Morocco's Institut de Formation Ferroviaire (IFF) and Office National des Chemins de Fer (ONCF), and the French IRT Railenium.
The SIGMA_RAIL's goal tackles challenges expressed in (i) the National priorities for railway transport in Morocco and Tunisia, and (ii) the Regional Transport Action Plan for the Mediterranean Region (RATP 2014-2020). One priority of those challenges is the development of knowledge, competence, and training which will meet the needs regarding, for example, railway productivity for both passengers and freight in the Maghreb.
Determining the SIGMA_RAIL training contents had required an accurate identification of training needs, which had been carried out through different activities: academic and industrial visits; debates with rail experts; mappings of engineering and master courses which are or could be related to railway sector; construction of a core competency reference guide and of a skills matrix.
Academic and industrials visits had been organized in the partner countries, enabling the project's members to discover academic good practices, research and technological platforms, and rail maintenance operations, as well as to meet academic leaders and political and socio-economic stakeholders in the field of transport, particularly in railway sector (the Tunisia's SNCFT railway operator and RFR Rapid Railway Network Company of Tunis; the RFI Italian Railway Network; etc.).
These visits had provided opportunities to discuss around training supply and expert human resources needs in terms of railway-related skills. The project's goal to propose e-learning

courses in rail engineering had met the expectations of Tunisian and Moroccan stakeholders of the railway sector. It was an excellent opportunity of collaboration between the university and the railway operators.

In fine, the training needs analysis has led to the definition of 17 online courses and a serious game built around railway infrastructure maintenance. Those results will be showed at the 5th UIC World Congress on Rail Training through demonstration and posters.

WCRT Topics addressed in paper, First Topic

National cooperation between the industry & education sectors at all levels

Optional Second Topic

Training design